Report From the Meeting of
CEPT Conference Preparatory Group
29 June – 1 July, 2004

The second meeting of the Conference Preparatory Group for WRC-07 (CPG) of European Conference of Post and Telecommunications (CEPT) was held in Oslo, Norway on June 29 to July 1, 2004. The highlights/decisions of the meeting, for each agenda item, are provided below.

Agenda Item 1.2 - *consideration of allocations and regulatory issues related to the Earth exploration-satellite (passive) service, space research (passive) service and the meteorological satellite service in accordance with Resolutions 742 (WRC-03) and 746 (WRC-03)*.

Issue 1: Sharing between the passive services and the fixed and mobile services in the 36-37 GHz band (Res. 742) - With regard to this issue CEPT decided to collect data on existing and potential systems (including military applications) and to conduct studies with the objective to define suitable EIRP density levels for active services. On this issue, the NATO stated that military mobile radio stations need spectrum support for roaming without geographical constraints or "taboo areas". The NATO urged CEPT to consider that sharing criteria for the band 36-37 GHz must not unduly constrain its use by military fixed and mobile radio stations.

Issue 2: Sharing between the passive services and the fixed and mobile services in the 10.6-10.68 GHz band (Res. 746) - With regard to this issue CEPT decided to determine sharing criteria between EESS (passive) and video SAP/SAB links (ref. ECC-Report 17) and to study any other sharing issues with applications in the mobile and fixed service for example potential Fixed Wireless Access (FWA) systems at 10.6-10.65 GHz.

Issue 3: Extension of the current 18.1-18.3 GHz geostationary meteorological satellites allocation in the space-to-Earth direction to 300 MHz of contiguous spectrum in the 18.0-18.4 GHz band (Res. 746) – CEPT decided that:

- for sharing with FS/MS, it will be necessary to study the required separation distances between receiving meteorological ground stations and fixed service installations..
- for sharing with FSS/BSS, the CEPT noted the need to conduct sharing analyses between GEO MetSats downliks and:

Agenda Item 1.3 - *allocations related to the Earth Exploration-Satellite Service (active), Space Research Service (active) and the Radiolocation service in accordance with Resolutions 747 (WRC-03)*.
Issue 1: Extension by 200 MHz into the band 9300-9500 MHz of the EESS (active) and the space research service (active) allocations, or if this is not possible, into the band 9 800- 10 000 MHz - with regard to this issue item, CEPT is in favor of a worldwide allocation to the EESS (active) in the frequency band 9300-9500 MHz provided that sharing with other services is feasible.

Issue 2: Upgrade of the radiolocation service to primary allocation in the bands 9 000-9 200 MHz and 9 300-9 500 MHz – CEPT intends to consider the results of ITU-R WP-7C and WP-8B studies on the compatibility between EESS (active) and Radiolocation and Radionavigation systems in the band 9 300 – 9 500 MHz. The CEPT position on this issue remained inconclusive. The CEPT Administrations were invited to state their positions on the upgrade of the radiolocation service to primary allocation status in the bands 9 000- 9 200 and 9 300- 9 500 MHz.
Sweden was of the opinion that further investigation of the possible extension of the FN 5.476A should be addressed.

Agenda Item 1.4 - *frequency-related matters for the future development of IMT-2000 and systems beyond IMT-2000 taking into account the results of ITU-R studies in accordance with Resolution* ***228 (Rev.WRC-03)***
Issue 1: "Naming" - The agenda item refers to the future development of IMT-2000 and systems beyond IMT-2000. CPG noted that in the ITU-R WP 8F consideration has been given to *noting d)* of Resolution 228 (WRC 2003) "that there is a need for appropriate naming in general to be developed in advance of WRC-07". With regard to this issue, CEPT supports the following:

- the term "IMT-2000" shall be retained to describe the current IMT-2000 radio interfaces and their future developments as detailed in M.1457 and M.1645;
- the generic root name IMT covers the capabilities of IMT-2000, future development of IMT-2000 and systems beyond IMT-2000;
- new name(s) for new radio interface(s) to address capabilities/elements should be developed;
- relationship between these new names and the terms used in the agenda item should be defined in time for final preparations for WRC07 and related deliverables should be developed in WP 8F.

Issue 2: Spectrum for future development of IMT-2000 and systems beyond - CEPT support the conclusions of the Recommendation M.1645:

- to continue to seek for globally common spectrum and harmonized frequency arrangements for the future development of IMT-2000 and systems beyond IMT-2000. Common global spectrum should be preferred to ensure global roaming and equipment-cost reduction through economies of scale;
- to consider the market requirements and the technical requirements to facilitate the cost-effective deployment of a new radio interface(s), when determining potential frequency ranges.

Issue 3: Spectrum to improve the coverage for IMT-2000 - CEPT did not consider this issue in detail. With regard to this issue, CEPT supports the following positions:

- proximity to bands already identified for IMT-2000 may lead to reduced complexity of equipment;
- that some bands may not be appropriate for identification on a global basis for the future development of IMT-2000 and systems beyond IMT-2000 because of the extent of use of these bands by existing services;
- that the already existing MSS allocations are assumed sufficient to meet the requirements of the satellite component of IMT-2000 in developing countries and sparsely populated areas;

- the impact of lower bands on the terminal size;
- added complexity required for the additional radio interface;
- higher man-made noise in lower frequency bands and its impact on the operation of CDMA.

Issue 4: Satellite component of future development of IMT-2000 and systems beyond – CPG will establish CEPT position on this issue at its future meeting.

Agenda Item 1.5 - *spectrum requirements and possible additional spectrum allocations for aeronautical telecommand and high bit-rate aeronautical telemetry.*

Issue 1: "Definition of "aeronautical telecommand" – CEPT noted that aeronautical telecommand is not defined in the ITU Radio Regulations. I this regard, CEPT considered draft definitions for "aeronautical telemetry" and "aeronautical telecommand". CEPT also consider a proposal to include a reference to Unmanned Air Vehicles (UAVs) in the brief but will do so at a later meeting.

Issue 2 - spectrum required to satisfy justified wideband aeronautical mobile telemetry requirements and associated telecommand above 3 GHz. CEPT considered that the bandwidth requirement of 60 MHz could be divided into five channels of 12 MHz so that five aircraft could be tested simultaneously in flight. Other requirements included up to 1 GHz of spectrum above 10 GHz. The meeting noted the CEPT/ERC Recommendation 62-02 E (1997) recommends that for future airborne telemetry applications the tuning range of equipment should primarily be in the frequency range 2300 – 2400 MHz; where the frequency band 2300 - 2330 MHz should primarily be used as a core band for airborne telemetry applications and that the band 2330 MHz - 2400 MHz should be used as an extension band where required

Issue 3 - Upgrade to primary, secondary allocations to the mobile service in the frequency range 3-16 GHz for the implementation of wideband aeronautical telemetry and associated telecommand. CEPT concluded that to accommodate the spectrum requirement for aeronautical telemetry and telecommand, the priority must be given to the designation of frequency bands already allocated to mobile service preferably on a primary basis.

Issue 4 - considering possible additional allocations to the mobile service, including aeronautical mobile, on a primary basis in the frequency range 3-16 GHz for the implementation of wideband aeronautical telemetry and associated telecommand. On this issue, CEPT is of the view that a review of all frequency bands between 3 and 30 GHz is necessary in order to identify the most appropriate bands to the aeronautical telemetry and telecommand and to facilitate the development of new technology.

Agenda Item 1.6 - *additional allocations for the aeronautical mobile (R) service in parts of the bands between 108 MHz and 6 GHz, in accordance with Resolution 414 (WRC-03) and, to study current satellite frequency allocations, that will support the modernization of civil aviation telecommunication systems, taking into account Resolution 415 (WRC-03).*

Issue 1: - consideration of additional allocations for the aeronautical mobile (R) service in parts of the bands between 108 MHz and 6 GHz. With regard to this issue, the CEPT noted that ICAO is focusing its work on two frequency bands: 960-1164 MHz and 5030-5150 MHz. There may also be a proposal for allocations to accommodate the operation of the Universal Access Transceiver (UAT) systems in the band 960-1164 MHz. The PT-3 also noted that since the VOR usage is decreasing there may be a need for studies in the 112-118 MHz band. The band 5 091-5 150 MHz is being considered for the provision of more information to the pilot and cockpit, and to reduce runway incursions. Eurocontrol has worked in conjunction with ICAO Europe, the European Commission, NATO and the EU member states to create a new independent forum for discussing, debating and forming a Common European Aviation Policy. A Common European Aviation Position for WRC-2007 is being worked on in parallel to the ICAO draft position for WRC 2007.

Issue 2: - study of current satellite frequency allocations that will support the modernization of civil aviation telecommunication systems. With regard to this issue, the CEPT noted that within ICAO, two main issues were identified:

a) use of VSAT systems to overcome shortcomings in terrestrial ground-ground communication systems; and

b) use of (generic) mobile satellite systems that could support aeronautical CNS/ATM communications.

Agenda Item 1.7 - *sharing between the mobile-satellite service and the space research service (passive) in the band 1 668-1 668.4 MHz, and between the mobile-satellite service and the mobile service in the band 1 668.4-1 675 MHz*. With regard to this agenda item, the CEPT decided to collect information on the characteristics of the planned space research (passive) systems (i.e., RADIO-ASTRON-Russia) and mobile service systems in the subject bands. Russia indicated that it will provide info on their RADIO-ASTRON to the next meeting of CPG. ERO sent a questionnaire to CEPT administrations on the use of the band 1668.4-1675 MHz by the mobile service.

Agenda Item 1.8 - *studies on technical sharing and regulatory provisions for the application of high altitude platform stations operating in the bands 27.5-28.35 GHz and 31-31.3 GHz in response to Resolution 145 (WRC-03), and for high altitude platform stations operating in the bands 47.2-47.5 GHz and 47.9-48.2 GHz in response to Resolution 122 (rev. WRC-03).*
With regard to this agenda item, CEPT will work to complete the studies for HAPS using the frequency bands 47.2-47.5 GHz and 47.9-48.2 GHz as required by Resolution 122 (Rev WRC-03), with the primary objective to protect existing services. With regard to Resolution 145, CEPT is concerned that studies of other bands in other Regions will result in pressure to introduce these additional bands in Region 1. The CEPT position includes text to ensure the protection of the FSS at 27 GHz and radio astronomy, EESS (passive) and space research (passive) in the band 31.3-31.8 GHz.

Agenda Item 1.9 - *technical, operational and regulatory provisions applicable to the use of the band 2 500-2 690 MHz by space services in order to facilitate sharing with current*

and future terrestrial services without placing undue constraint on the services to which the band is allocated
With regard to this agenda item, CEPT preliminary positions are as follows:

1. The scope of this agenda item is limited to technical, operational and regulatory provisions applicable to the space services systems' transmitting stations in regard to potential victim terrestrial stations in the FS or MS, in the band 2500 – 2690 MHz.
2. Technical, operational and regulatory provisions applicable to terrestrial services are should not be considered under this agenda item.
3. The future deployment of terrestrial IMT-2000 systems in the 2500 - 2690 MHz must not be constrained within CEPT countries.
4. The existing terrestrial systems in the 2500-2690 MHz band within CEPT countries must be protected from interference.
5. The sharing conditions between the GSO broadcasting satellite service (sound), the non-GSO broadcasting satellite service (sound) and terrestrial services in the 2605-2655 MHz band, have been covered by WRC-03 and "shall not be challenged".

Agenda Item 1.10 - *review of the regulatory procedures and associated technical criteria of Appendix 30B, without impact on existing allotments or assignments, Resolution 146 (WRC-03).*
The CPG developed a comprehensive list of refinements and modifications to the regulatory procedures and associated technical criteria of Appendix 30B.

Agenda Item 1.11 - *sharing criteria and regulatory provisions for the protection of terrestrial services, in particular terrestrial television broadcasting services, in the 620-790 MHz band from GSO BSS networks and non-GSO BSS satellite networks or systems.*
Issue 1: - protection of terrestrial television from BSS transmissions. The CEPT noted that results of the studies to date indicate that that analogue television is more susceptible to interference from BSS than DVB-T. CEPT noted that only the total pfd levels which should not be exceeded by the aggregation of all interfering BSS space stations transmitting in the same band have been derived. So it may be necessary to find out the pfd limit for an individual satellite.

Issue 2:- protection of SAP/SAB from BSS transmissions. Studies on the protection of SAB/SAP from BSS transmissions are ongoing within CEPT SE.

Issue 3: - the protection of aeronautical radio navigation from BSS transmissions
The band 645-862 MHz is allocated to the aeronautical radio navigation service on a primary basis in several CEPT countries as per RR No. 5.312. Studies on the protection of aeronautical radio navigation from BSS transmissions are planned.

Agenda Item 1.12 - *Coordination and notification procedures for satellite networks" in accordance with Resolution **86 (WRC-03).***
CPG had no substantive discussion of this agenda item.

Agenda Item 1.13 – *Allocations in the HF bands (4 MHz to 10 MHz)*
The CPG considered recommendation of PT 4 that consistent with the Resolution 351 any spectrum no longer in use by the maritime service should be included in the work of WRC-07, the CPG endorsed this recommendation.

Agenda Item 1.14 - *Operational procedures and requirements of the Global Maritime Distress and Safety System (GMDSS) and other related provisions of the Radio Regulations*

CEPT supports phasing out of aural listening watch on VHF channel 16. Ships could be required to keep watch on channel 16 by means of tuned equipment. CEPT will seek to update Resolution 331 nad associated Radio Regulations. CEPT noted that administartions outside the region are likely to favor maintaining the use of the CH 16 voice distress procedures. Among other things, this will ensure that all classes of shipping have a common means of communication available. CEPT also supports the development and introduction of digital and spectrally efficient analogue technologies to alleviate the channel congestion in the VHF maritime mobile service. CEPT will seek to revise Appendix 18 to facilitate such technologies.

Agenda Item 1.15 - *secondary allocation to the amateur service in the frequency band 135.7-137.8 kHz.*
As ERC Recommendation 62-01 concerning the use of this frequency band was adopted in 1997 and a number of CEPT member countries have since allowed use of the band by its radio amateurs. CEPT intends to support a secondary allocation to the amateur service in the frequency band 135.7- 137.8 kHz.

Agenda Item 1.16 - *regulatory and operational provisions for Maritime Mobile Service Identities (MMSIs) for equipment other than shipborne mobile equipment.*
CEPT intends to support the assignment of the assignment of MMSIs for Automatic Identification Systems (AIS) on search and rescue (SAR) aircraft and aids to navigation. In addition, it was agreed that the MMSI format used for AIS on SAR aircraft and aids to navigation should be unique and entirely different from MMSIs assigned to ships or coast stations. CEPT plans to support the registration of MMSIs used for AIS on SAR aircraft and aids to navigation in the Maritime Mobile Access and Retrieval System (MARS).

Agenda Item 1.17 - *allocation to the FSS for feeder links for non-geostationary-satellite networks in the mobile-satellite service with service links below 1 GHz in the bands 1390-1392 MHz (Earth-to-space) and 1430-1432 MHz (space-to-Earth)*. With regard to this agenda item, the CEPT intends to seek the following regulatory constraints on the possible FSS allocation in order to protect allocated in-band and adjacent band services:

- a pfd limit of [-164] dBW/m2 in 4 kHz in the band 1430-1432 MHz for the protection of the Fixed Service,
- an epfd limit of –243 dBW/m² in 27 MHz and –259 dBW/m² in any 20 kHz bandwidth for 98 % of 2000 seconds measurement periods at each radio astronomy station for spectral line observations in the band 1400-1427 MHz for the protection of the Radioastronomy Service,

- an emission power limit of [-98] dBW in any 4 kHz bandwidth of the band 1400-1427 MHz for the protection of the Earth Exploration satellite Service.

Agenda Item 1.18 - *pfd limits in the band 17.7-19.7 GHz for satellite systems using highly inclined orbits.*
CEPT noted the need to ensure protection for the existing services in the band 17.7-19.7 GHz. This band is used extensively in Europe for fixed services. CEPT supports the technical studies with the aim of developing pfd limits that protect FS systems from satellite systems operating in Highly Inclined Orbits. The UK (John Shaw) had difficulty with the wording/meaning of HEO—to be clarified.

Agenda Item 1.19 - *spectrum requirements for global broadband satellite systems in order to identify possible global harmonized FSS frequency bands for the use of Internet applications, and consider the appropriate regulatory/technical provision*s.
The CPG noted that the WP4A at the April 2004 meeting considered possible band pairs for the Internet applications. In addition, it was noted in WP 4A that the spectrum requirements for this Agenda Item were being considered below 17 GHz. CEPT did not develop a preliminary position on this agenda item.

Agenda Item 1.20 - *regulatory measures for the protection of the Earth exploration-satellite service (passive) from unwanted emissions of active services*.
CPG had no substantive discussion of this agenda item.

Agenda item 1.21 - *compatibility between radio astronomy service and active space services*.
CPG had no substantive discussion of this agenda item.

Agenda Item 7.1– *Report of the Director of the Radiocommunication Bureau*
Resolution 951 - CEPT supports the ITU-R studies with the aim of identifying:

- How the current international regulatory structure has evolved in order to respond to technical and operational requirements
- What flexibility has been achieved under this structure
- What changes may be required/feasible to improve this flexibility
- How could this structure be made more responsive to new requirements
- What are the potential drawbacks of the possible changes to this structure

Documents
The documents of this meeting are available at:
http://www.ero.dk

Next meeting
The next meeting of CEPT CPG is scheduled for 17 – 20 January 2005, in Neuchatel, Switzerland.